

# Specifications — MediaLink Switchers (MLS)

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## Video

Gain .....	Unity
Bandwidth	
MLS 306 .....	280 MHz (-3dB), fully loaded
All other models .....	350 MHz (-3dB), fully loaded
Frequency response .....	< ± 0.1dB @ 30 MHz
Differential phase error .....	1.5°, 0 to 10 MHz
Differential gain error .....	1.5%, 0 to 10 MHz
Crosstalk .....	-50dB @ 5 MHz

## Video input

Number/signal type	
MLS 306 .....	3 RGBHV, RGBS, RGsB, or RsGsBs 3 S-video, composite video
MLS 506 Series .....	3 RGBHV, RGBS, RGsB, or RsGsBs 3 component video, S-video, or composite video
Connectors	
MLS 306 .....	3 female 15-pin HD (RGB computer video) 3 female 4-pin mini-DIN (S-video) 3 female BNC (composite video)
MLS 506 Series .....	Female BNCs
Minimum/maximum levels .....	Analog ..... 0.0V to 2.0V p-p with no offset
Impedance .....	75 ohms
Horizontal frequency .....	15 kHz to 150 kHz
Vertical frequency .....	30 Hz to 150 Hz
Return loss .....	-45dB @ 5 MHz
Maximum DC offset .....	1.5V

## Video output

Number/signal type	
MLS 306 .....	2 RGBHV, RGBS, RGsB, or RsGsBs 1 S-video 1 composite video
MLS 506 Series .....	1 RGBHV, RGBS, RGsB, or RsGsBs 1 component video 1 S-video 1 composite video
Connectors	
MLS 306 .....	1 female 15-pin HD (RGB computer video output 1) 5 female BNC (RGB output 2) 2 female BNC (S-video) 1 female BNC (composite video)
MLS 506 Series .....	Female BNCs
Minimum/maximum levels .....	Analog ..... 0.0V to 2.0V p-p with no offset
Impedance .....	75 ohms
Return loss .....	-45dB @ 5 MHz
DC offset .....	± 5mV maximum
Switching type .....	Triple-Action for RGB

## Sync

Input/output type .....	RGBHV, RGBS, RGsB, RsGsBs
Standards .....	NTSC 3.58, NTSC 4.43, PAL, SECAM
Input level .....	2V to 5V p-p
Output level .....	TTL ..... 5.0V p-p

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Input impedance .....	>1 kohms
Output impedance .....	75 ohms
Max input voltage .....	5V p-p
Max propagation delay...	30 ns
Polarity .....	Positive or negative (follows input)

## Audio

Frequency response	
MLS 306, MLS 506 .....	20 Hz to 20 kHz, +0dB/-3dB
MLS 506MA .....	50 Hz to 15 kHz, +0dB/-1dB; 20 Hz to 20 kHz, +0dB/-3dB
MLS 506SA .....	20 Hz to 20 kHz, +0dB/-1dB at 30 W into 8 ohms
THD + Noise	
MLS 306, MLS 506 .....	<0.2% @ 50 Hz to 22 kHz at rated maximum output drive
MLS 506MA .....	<0.8% @ 50 Hz to 22 kHz at rated maximum output drive
MLS 506SA .....	<0.5% @ 1 kHz at 30 W into 8 ohms
S/N .....	>90dB at 22 Hz to 22 kHz
Crosstalk .....	<-65dB @ 20 Hz to 20 kHz, <-80dB @ 1kHz and below 60 Hz, fully loaded
Stereo channel separation	
MLS 506SA .....	>80dB @ 1 kHz
All other models .....	>90dB @ 1 kHz
CMRR .....	>90dB @ 20 Hz to 200 Hz, >60dB @ 20 Hz to 20 kHz

## Audio input

Number/signal type	
MLS 306, MLS 506 .....	6 stereo, balanced/unbalanced
MLS 506MA/SA .....	7 stereo, balanced/unbalanced
Connectors	
MLS 306 .....	Inputs 1 to 3 ..... 3.5 mm captive screw connectors, 5-pole
	Inputs 4 to 6 ..... 3.5 mm captive screw connectors, 5-pole or female 3.5 mm mini stereo jacks (unbalanced)
MLS 506 .....	6 3.5 mm captive screw connectors, 5-pole
MLS 506MA/SA .....	7 3.5 mm captive screw connectors, 5-pole
Impedance .....	>18 kohms unbalanced/balanced
Maximum level .....	+21dBu (balanced or unbalanced) at stated % THD + N
Input gain adjustment .....	MLS 306, MLS 506 ..... -15dB to +9dB, adjustable per input
Input level adjustment .....	MLS 506MA, MLS 506SA ..... -78dB to +24dB (in 1 to 100 steps), adjustable per input

## Audio — effects return (MLS 506MA & MLS 506SA)

Number/signal type .....	1 stereo, unbalanced
Connectors .....	1 3.5 mm captive screw connector, 3-pole
Impedance .....	>10 kohms unbalanced
Level .....	+4dBu, unbalanced

## Audio — effects send (MLS 506MA & MLS 506SA)

Number/signal type .....	1 stereo, unbalanced
Connectors .....	1 3.5 mm captive screw connector, 3-pole
Impedance .....	50 ohms, unbalanced
Level .....	+4dBu, unbalanced

## Specifications — MediaLink Switchers (cont'd)

### Audio output — line level (all models)

Number/signal type .....	2 stereo/mono (selectable), balanced/unbalanced (1 fixed, 1 variable)
Connectors .....	2 3.5 mm captive screw connectors, 5 pole
Impedance .....	50 ohms unbalanced, 100 ohms balanced
Gain — fixed output	
MLS 306, MLS 506	
Unbalanced .....	0dB
Balanced .....	+6dB
MLS 506MA, MLS 506SA	
Unbalanced .....	0dB
Balanced .....	+6dB
Gain — variable output only .....	Selectable output level
MLS 306, MLS 506	
Unbalanced .....	0dB (jumper selectable), or -6dB (jumper selectable, default)
Balanced .....	+6dB (jumper selectable), or 0dB (jumper selectable, default)
MLS 506MA, MLS 506SA	
Unbalanced .....	0dB (jumper selectable), or -6dB (jumper selectable, default)
Balanced .....	+6dB (jumper selectable), or 0dB (jumper selectable, default)
Gain error .....	±0.1dB channel to channel
Maximum level (Hi-Z) .....	>+21dBu, balanced at stated %THD+N
Maximum level (600 ohm) .....	>+15dBm, balanced at stated %THD+N

**NOTE** 0dBu = 0.775 volts (RMS).

### Audio output — power amp (MLS 506MA & MLS 506SA)

Number/ signal type	
MLS 506MA .....	1 mono
MLS 506SA .....	1 stereo
Connectors .....	4 position screw terminal
Sensitivity .....	-20dBu (100mV) for 30 watts output
Drive/power (full power out) ...	At less than 0.5% THD from 20 Hz to 20 kHz:
MLS 506MA (70V, mono)	30 watts (RMS); 4 ohm, 8 ohm, or 70V output taps with common/ground, transformer coupled
MLS 506MA (100V, mono)	30 watts (RMS); 4 ohm, 8 ohm, or 100V output taps with common/ground, transformer coupled
MLS 506SA (stereo) .....	60 watts; 30 watts (RMS) per channel, 4 ohm or 8 ohm load
Protection	
MLS 506MA .....	Input limiting, thermal, short circuit
MLS 506SA .....	Input limiting (user specifies 4 ohm or 8 ohm load), thermal, short circuit
Indication	
MLS 506MA .....	Clip LED indicates the onset of 30 watt power limiting
MLS 506SA .....	Clip LED indicates the onset of 30 watt power limiting on left or right

**NOTE** 0dBu = 0.775 volts (RMS).

### Control/remote — switcher

Serial control port .....	1 RS-232, female 9-pin D connector (shared with contact closure port) 1 3.5 mm captive screw connector, 5 pole (for control via MLC 206; shared with IR control port)
Baud rate and protocol .....	9600, 8-bit, 1 stop bit, no parity
Serial control pin configurations	2 = TX, 3 = RX, 5 = GND

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Contact closure .....	1 female 9-pin D connector (shared with serial control port)
Contact closure pin configuration...	pin 1 = input 1, pin 4 = input 2, pin 5 = ground, pin 6 = input 3, pin 7 = input 4, pin 8 = input 5, pin 9 = input 6
IR control port .....	1 3.5 mm captive screw connector, 5 pole (shared with the MLC/IR serial control port) for 38 kHz IR signals
Program control .....	Extron's control program for Windows® Extron's Simple Instruction Set™ – SIS™

## General

Power .....	100VAC to 240VAC, 50/60 Hz, internal, autoswitchable
MLS 306, MLS 506 .....	20 watts
MLS 506MA .....	60 watts
MLS 506SA .....	100 watts
Temperature/humidity .....	Storage -40° to +158°F (-40° to +70°C) / 10% to 90%, non-condensing Operating +32° to +122°F (0° to +50°C) / 10% to 90%, non-condensing
Rack mount .....	Yes, with included brackets
Enclosure type .....	Metal
Enclosure dimensions	
MLS 306 .....	1.75" H x 17.5" W x 9.4" D (1U high, full rack width) 4.4 cm H x 44.4 cm W x 23.9 cm D (Depth excludes connectors and knobs. Width excludes rack ears.)
MLS 506 Series .....	3.5" H x 17.5" W x 9.4" D (2U high, full rack width) 8.9 cm H x 44.4 cm W x 23.9 cm D (Depth excludes connectors and knobs. Width excludes rack ears.)
Product weight	
MLS 306 .....	5.5 lbs (2.5 kg)
MLS 506 .....	7.0 lbs (3.2 kg)
MLS 506MA .....	10.2 lbs (4.6 kg)
MLS 506SA .....	8.6 lbs (3.9 kg)
Shipping weight	
MLS 306 .....	9 lbs (4.1 kg)
MLS 506 .....	14 lbs (6.4 kg)
MLS 506MA .....	17 lbs (7.7 kg)
MLS 506 SA .....	16 lbs (7.3 kg)
Vibration .....	ISTA/NSTA 1A in carton (International Safe Transit Association)
Listings .....	UL, CUL
Compliances .....	CE, FCC Class A, VCCI, AS/NZS, ICES
MTBF .....	30,000 hours
Warranty .....	3 years parts and labor

**NOTE** Specifications are subject to change without notice.

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